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(54) Title: HAND-CLEANING LIQUID.

(57) Abstract

A hand-cleaning liquid has been developed, containing in particular a cleansing product and a disinfectant product in cellulose-thickened water; a skin treatment product and a viscosity-raising product can be added. This hand-cleaning liquid has the property of being able to be used in very small amounts and of not requiring water or supplementary liquid, which permits it to be used in all locations that are not connected to a water-distribution network or drainage network. It can thus easily be packaged in small packages for multiple uses.

HAND-CLEANING LIQUID

The present invention relates to a liquid for cleaning the hands, or more generally for cleaning the body, not requiring means of rinsing such as water for its use,

On numerous occasions, it can be necessary to clean the hands properly, but no water faucet connection is available for doing this; we cite for example in the car after changing a tire, at a picnic, at a building site or more generally in any place that is not connected to a water distribution network.

Various solutions exist that make it possible to attempt to clean the hands in such cases, the most trivial consisting of having soap and a store of water in a bottle or a suitable can; the materials necessary for this simple operation quickly become cumbersome if it is wished for example to have available soap capable of cleaning hands dirtied by dirty grease, but also another lighter soap that does not damage the hands when they are not very dirty; also, the store of water being limited, only a few cleanings can be done, and finally, depending on circumstances, this solution is not suitable for the case where there is no possibility of a water supply, on location for example. Another possibility consists of using damp napkins, kept in a watertight wrapping, but whose action is more perfuming than cleansing.

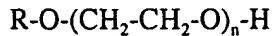
A number of patents or patent applications describe cleaning products containing one or several of the components entering into the formulation of one or other of the forms of execution of the present product; in particular, the documents GB-A-930,394, GB-A-2,106,927, BE-A-672,899, US-A-2,994,665, DE-A-2,846,639, but their application is fundamentally different from that of the present invention, since it involves, respectively, a dish-washing and clothes-washing product, a product for cleaning toilet bowls, a washing-machine product, a floor-cleaning product, a cleaning product for the home, dishes, automobiles and windows, as well as a cleaning product for cars, washing machines and floors. These different products, while they contain one or other of the products of the present invention, do not have a formulation designed for use for cleaning the body. The European patent application EP-A-166,608 describes a cleansing product for use on the body, but which requires rinsing with water for its removal from the body after use.

The invention proposes to make available a hand-cleaning liquid, the use of which does not encounter the drawbacks and disadvantages mentioned above; this cleaning liquid, not requiring water or supplementary liquid, can be used in any place not connected either to a water-distribution system or a drainage system. Its cleaning power being very high, only a very small quantity of liquid is necessary, even for heavily soiled hands, and in addition, since disinfectant and skin-care components are included in the liquid, its use is not prejudicial to the skin of the hands. However, it should be noted that this product can also be used as a cleansing liquid soap, with water, for people who, by reflex, habit or unconsciously, cause a running water faucet found nearby to function.

The base of the composition of the cleansing product is water, thickened by means of a cellulose product, thus permitting a very small quantity of product to be sufficient for the effective cleansing of the hands. Preferably, this cellulose product will be an ethylhydroxyethylcellulose, known by the name BERMOCOLL E 481 FQ. Other cellulose products can also be used, such as for example purified sodium carboxymethylcellulose, methylcellulose, methylhydroxypropylcellulose or sodium alginate. It is possible

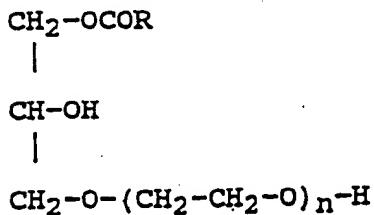
on the other hand to obtain uniformity of viscosity of the cleansing product by adding fatty acid amides, for example lauric acid diethanolamide or lauric acid isopropanolamide to the above constituent. In the case where BERMOCOLL E 481 FQ is used, the concentration of the said cellulose product can vary between 0.2% and 1.0% by mass, the best concentration being 0.35% by mass. In the case where the other cellulose products cited are used, their concentration can vary between 0.1% and 0.5% by mass.

As emulsifier or cleansing product, a non-ionic fatty acid polyglycol ether with 10 to 50 moles EO (EO = ethoxylate) is used, the structure of which is:



The higher the degree of ethoxylation, the foamier the product. The concentration of the said emulsifier, in the case where REWOPAL TA 25p is used, is from 0.5 to 2.5% by mass, preferably 0.78%.

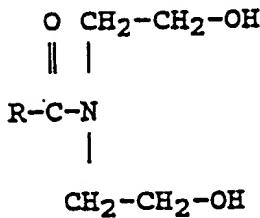
For the well-being of the skin after cleansing, ethoxylated mono- and diglycerides are recommended or a non-ionic surfactant of the REWODERM LI 63 type, of which the structure is:



This constituent is used at between 0.2% and 1.0% by mass, the best concentration being 0.35% by mass.

Similar products (ethoxylated diglycerides) can be used in the same proportions.

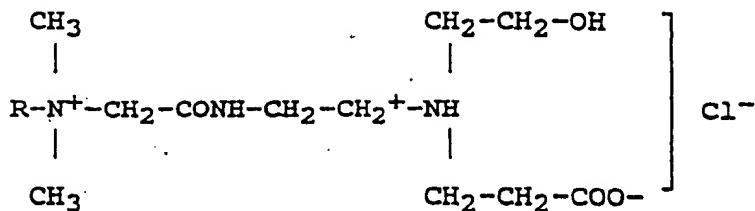
In order to raise the viscosity and control the foaming structure, a non-ionic surfactant based on a fatty acid amide is used, for example a copra acid diethanolamide of the REWOMID DC 212s type, the structure of which is:



This compound is used in a concentration of from 0.1% to 2.5% by mass, the best concentration being 0.78%.

The REWOMID DC 212s could be replaced by sodium chloride (NaCl) in the same proportions.

A glycine derivative or a cationic ampholyte is used as a disinfectant additive; these amphoteric surfactants give the best results. The constituent used is of the REWOTERIC QAM 50 type, of which the structure is:



This constituent is used in a proportion of from 0.1% to 1.0% by mass, the preferred concentration being 0.39%.

Other bacteriostatic products, such as LANOQUAT 50, based on lanolin sulfosuccinates can replace REWOTERIC QAM 50 in the same concentrations.

In the case of the hand-cleansing liquid according to the invention, the concentration of the cleansing products can vary between 2 and 3 % of active substance: the rest of the solution is water.

The pH value and the viscosity vary from 6 to 8 and 5 to 7 Pa.s, respectively, depending on the formulations used.

It is possible to add to the base formulation additives, such as preservation products, perfumes, colorants, as well as natural concentrations of different plants, thus making it possible to obtain specific cleansing products, for example for sensitive skins, to treat various disorders, etc.

In view of the thickening action of BERMOCOLL E 481 FQ, only a very small quantity of product permits complete and efficacious cleansing of the hands. The optimal dosage is between 0.8 ml and 1.2 ml; because of this, it will be possible to make the packaging in small quantities, of the order of 1 to several dl, permitting a few dozen or even a hundred uses. Thus, the bottle containing the hand-cleansing product will preferably be provided with a dosaging cap or spout so as to deliver only the required amount of liquid; it is also possible to anticipate a packaging of the liquid in the form of a spray or atomizer.

To use the hand-washing product, it suffices to place the requisite quantity of liquid on the hands, then to rub the hands against each other and to wipe the hands using a paper napkin or tissue (the operation can be repeated if necessary once or several times in case of extremely dirty hands); it is not necessary to rinse the hands afterwards and the latter are not coated with a greasy film such as may be encountered with other kinds of products. By virtue of the action of the disinfectant, the hands are disinfected and treated by the REWODERM LI 63.

This hand-cleansing product being of universal use, it can be packaged in many ways depending on the specific use anticipated; for example being presented in the form of a dispenser available in the concourses of railroad stations or airports, in department stores, hotels and restaurants, public transportation and finally in all public places, and also professional premises, workshops and worksites for example; in these cases it is particularly well suited to be used in one of the dispensers that are the subject of the published patent application WO 90/10285.

For personal or family use, the bottle can be part of a cleaning kit, intended particularly for the car, camping or for the purse or pocket; it can also be in the form of a mini-package of a single dose distributed with a paper tissue in airplanes, restaurants, etc. The hand-cleansing liquid can also make up part of a table display with paper tissues or napkins, in particular to replace the finger-bowls used after certain dishes.

In view of its properties, this cleansing product can easily also be used for many other uses than the cleaning of the hands, particularly in locations where water absolutely must be conserved; it can be made use of for the complete cleansing of the human body, in the form of a "waterless shower" in high mountain refuges, in civil protection shelters, for the military or in cabins where space is conserved among others. It is also to be noted that this product can also be used for the cleaning of any animals, objects or surfaces needing to be cleaned and/or disinfected.

Thus, the hand-cleansing product in view of its cleansing qualities as well as the fact that it does not require any water at all for its use is very universally useful; in view of the small amount of liquid required, it can very easily be packaged in reduced volume, whether this is for public places, industry, transportation, or family or personal use.

CLAIMS

1. Body-cleansing method characterized by the fact that it uses solely a body-cleansing liquid containing thickened water and a cleansing product, without requiring means of rinsing.
2. Body-cleansing product for use by the method in accordance with claim 1, characterized by the fact that the cellulose serving to thicken the water is an ethylhydroxyethyl cellulose of which the mass concentration can vary between 0.2% and 1.0%, preferably 0.35%, or a purified carboxymethylcellulose sodium, or a methylcellulose, methylhydroxypropylcellulose, or a hydroxyethyl cellulose, or a sodium alginate, of which the mass concentration can vary between 0.1% and 0.5%.
3. Body-cleansing liquid in accordance with claim 2, characterized by the fact that lauric acid diethanolamide or lauric acid isopropanolamide is added to the formulation.
4. Body-cleansing liquid for use by the method in accordance with claim 1, characterized by the fact that the cleansing product is a non-ionic fatty acid polyglycol ether with 10 to 50 mol ethoxylates, of which the mass concentration can vary between 0.5% and 2.5%, preferably 0.78%.
5. Body-cleansing liquid for use by the method in accordance with claim 1, characterized by the fact that it includes in addition a disinfectant product.
6. Body-cleansing liquid in accordance with claim 5, characterized by the fact that the disinfectant product is a glycine derivative or a cationic ampholyte or a product based on lanolin sulfosuccinates, of which the mass concentration can vary between 0.1% and 1.0%, preferably 0.39%.
7. Body-cleansing liquid in accordance with claims 2 to 5, characterized by the fact that to the said liquid is added a skin treatment product and/or a viscosity-raising product.
8. Body-cleansing liquid in accordance with claim 7, characterized by the fact that the skin treatment product is an ethoxylated mono or diglyceride of which the mass concentration can vary between 0.2% and 1.0%, preferably 0.35%.
9. Body-cleansing liquid in accordance with claim 7, characterized by the fact that the viscosity-raising product is a diethanolamide of copra acid or sodium chloride, the mass concentration of which can vary between 0.1% and 2.5%, preferably 0.78%.
10. Use of the body cleansing liquid in accordance with the preceding claims, characterized by the fact that the said liquid is intended for the cleansing of the hands and is packaged in a bottle provided with a dosing spout, or in a spray, or in an atomizer or in a one-unit mini-packaging.
11. Use of the body cleansing liquid in accordance with the preceding claims for a waterless shower.

MODIFIED CLAIMS

(Received by the International Office
on February 28, 1991 (02/28/1991);

Claims 1 and 2 are replaced by the modified claim 1;
Claims 3-11 are renumbered 2-10 (2 pages))

1. Body-cleansing liquid containing thickened water and a cleansing product, intended to be used without requiring means of rinsing, characterized by the fact that the cellulose serving for the thickening of the water is an ethylhydroxyethylcellulose of which the mass concentration can vary between 0.2% and 1.0%, preferably 0.35%, or a purified sodium carboxymethylcellulose or a methylcellulose, methylhydroxypropylcellulose, or a hydroxyethylcellulose or a sodium alginate of which the mass concentration can vary between 0.1% and 0.5%.
2. Body-cleansing liquid in accordance with claim 1, characterized by the fact that lauric acid diethanolamide or lauric acid isopropanolamide is added to the formulation.
3. Body-cleansing liquid in accordance with claim 1, characterized by the fact that the cleansing product is a non-ionic fatty acid polyglycol ether with 10 to 50 mol ethoxylates, in which the mass concentration can vary between 0.5% and 2.5%, preferably 0.78%.
4. Body-cleansing liquid in accordance with claim 1, characterized by the fact that it includes in addition a disinfectant product.
5. Body-cleansing liquid in accordance with claim 4, characterized by the fact that the disinfectant product is a glycine derivative or a cationic ampholyte or a product based on lanolin sulfosuccinates, of which the mass concentration can vary between 0.1% and 1.0%, preferably 0.39%.
6. Body-cleansing liquid in accordance with claims 1 to 5, characterized by the fact that to the said liquid is added a skin treatment product and/or a viscosity-raising product.

7. Body-cleansing liquid in accordance with claim 6, characterized by the fact that the skin treatment product is an ethoxylated mono- or diglyceride of which the mass concentration can vary between 0.2% and 1.0%, preferably 0.35%.
8. Body-cleansing liquid in accordance with claim 6, characterized by the fact that the viscosity-raising product is a diethanolamide of copra acid or sodium chloride, the mass concentration of which can vary between 0.1% and 2.5%, preferably 0.78%.
9. Use of the body cleansing liquid in accordance with the preceding claims, characterized by the fact that the said liquid is intended for the cleansing of the hands and is packaged in a bottle provided with a measuring spout, or in a spray, or in an atomizer or in a one-dose mini-packaging.
10. Use of the body cleansing liquid in accordance with the preceding claims, for a waterless shower.

DECLARATION IN ACCORDANCE WITH ARTICLE 19

The publication "Formulation and Function of Cosmetics" by Dr. J. Stephan Jellineck, John Wiley & Sons, Inc., NY, USA, 1970, describes on page 223 a series of products for dry cleansing of the hands, of which two contain sodium carboxymethylcellulose in concentrations of 2.50 and 6%. The old claim 2 (new claim 1) mentions the same product, as a variant, in a mass concentration that can vary from 0.1 to 0.5%. The difference in concentration is essential for the dry use of the cleansing liquid, that is, without requiring rinsing water, since a concentration higher than 0.5% leaves a residue of the said product on the hands after dry wiping, that is, the hands remain sticky. The concentrations announced in the above-mentioned article thus render the product unusable for cleansing and wiping without using means of rinsing.

If the old claim 1 is anteriorized by the article in question, the new claim 1, taking as a preamble the material of the old claim 1, and of which the characterizing portion corresponds to the old claim 2, is patentable for the reasons mentioned above.

The publication mentioned above describes a hand cleansing product packaged in a tube; the old claim 10 (new 9) describes a hand cleansing product packaged in various ways different from a tube. This claim is thus patentable.

Similarly, the publication in question nowhere speaks of the possibility of using the products described on another location of the human body than on the hands. It is not at all obvious that a product that can be used for the hands can also be used on other parts of the body that may possibly be more sensitive. The use of the product according to the old claim 11 (new 10) for a waterless shower is thus patentable.

The patent application EP-A-0 166 608 mentions expressly that rinsing tests with water had taken place for the development of the products claimed. These products are thus fundamentally different from those of the invention since they require water for their elimination, even if they contain certain compounds similar to those of the products in accordance with the invention; the importance of the concentration of the said constituents for use without rinsing in accordance with the invention was seen above.